IVI Specialty Vehicle Program Partnership: Informational Meeting
Washington, DC (at TRB Annual Meeting)
January 13, 1999
8:00 – 9:15 a.m.

Agenda Items:

- 8:00-8:30 Informational on the IVI SV Research Partnership
- 8:30-8:50 Questions
- 8:50-9:20 Discussion of Research Directions

Chronology of Event

1. Prepared Intro by Monica Kress (Partnership Chairperson)

"I designed the agenda to include information on the IVI SV Program Partnership – I don't intend to actually go until 9:15, though you ought to feel free to ask questions or provide comments after or during this presentation."

(Briefly outlined the agenda)

"As I outlined in the original announcement of this meeting, this first segment is for your information, for clarification of what opportunities exist for you, and hopefully to encourage you to consider if your organization would participate in the program, either through partnership or proposing research.

So, let me begin with some background on IVI SV in general, then I'll move on to the foundation of the Program Partnership."

2. Slide Presentation
(Distributed handouts: Partnership WorkPlan, Flyer, Steering Group Recommendations)

IVI Specialty Vehicle Program Partnership

Monica Kress	California DOT
Marthand Nookala	Minnesota DOT
Gene McHale	FHWA

TEA - 21 and IVI

Intelligent Vehicle Initiative

- *Specialty Vehicles*
  - *Highway Maintenance and Construction*
  - *Law Enforcement*
  - *Emergency Medical*
  - *Fire Response*

Specialty Vehicle Distinctions

Operate in conjunction with central control centers
Operate in adverse/extreme conditions
Are higher cost when fully equipped
Not unusual to include more new and emerging technologies
Have highly trained operators
Operators operate under stress

Specialty Vehicle Platform Research

Benefit to Public Safety

Emergency Fire, Medical, and Law Response Vehicles

IVI products can assist in avoiding hazards in their extreme environment:

Travel at high speeds through dense city traffic
Travel at low speeds in fast highway traffic
Rural weather, visibility, and road conditions

Specialty Vehicle Platform Research

Benefit to Public Safety

Highway Maintenance Vehicles

Collision Warning systems
Reduction of cars striking winter maintenance vehicles from rear
Enhance safety for public during heavy snowfalls, particularly in rural areas
Lane striping: accurate positioning of vehicle can increase safety and speed
Reduced op costs due to fewer accidents and more efficiency

Specialty Vehicle Platform Research

FHWA Steering Group 6/9/98

A mechanism to facilitate stakeholder involvement (this Partnership)
Develop understanding of the special operating environment and identify performance requirements
Extend IVI technologies to support safer ops
Demonstrate benefits to identifies stakeholders
Educate market regarding enhanced capabilities
Achieve proof-of-concept for high priority user services within three years

FHWA SV Steering Group Recommendations

Activities

Assess the problem
Assess user needs
Provide solutions
Assess the human-machine interface
Conduct cost/benefit analyses

FHWA SV Steering Group Recommendations

Related User Services

Collision Warning
Rear Impact Warning and Avoidance
Intersection Collision Warning and Avoidance
Lane Change / Merge Collision Warning and Avoidance
Obstacle Warning and Avoidance
Pedestrian Warning and Avoidance
Road Departure Warning and Avoidance
Heavy Vehicle Stability Warning and Avoidance
Railroad Crossing Warning and Avoidance
vision Enhancement
Driver Condition Monitoring
Road Condition Monitoring
Lane Position Indication
Driver Assistance in Task Performance - Steering
Driver Assistance in Task Performance - Throttle and Brake

FHWA SV Steering Group Recommendations

High Priority User Services

➢**Highway Maintenance Vehicles**

Forward Collision Warning and Avoidance
Obstacle Warning and Avoidance
Lane Position Indication
Road Departure Warning and Avoidance
Rear Impact Warning and Avoidance
Vision Enhancement

➢**Law Enforcement / Emergency Medical Response / Fire Response Vehicles**

Intersection Collision Warning and Avoidance
Forward Collision Warning and Avoidance
Heavy Vehicle Stabilization (for Fire Trucks)
Vision Enhancement
Lane Change / Merge Collision Warning and Avoidance

IVI Specialty Vehicle Program Partnership

- Founded 10/98
- Pooled Funds
- Projects TBD
- Partners Provide Stakeholder Needs
- Partners Provide Technical Advice
- Partners Guide Project Selection
- Ongoing Membership

IVI Specialty Vehicle Program Partnership

Membership

- Ongoing recruitment
- Public or Private Sector
- Pooled Fund mechanism
- Legal agreements as necessary
- Semi-annual meeting
- Frequent "Virtual Meetings"

IVI Specialty Vehicle Program Partnership

Funding Projects

- Periodic solicitation for proposals
- Criteria set by partners
- Analysis of problem/market OR Technical field testing of equipment
- Cost Sharing by researcher
- Contribution to projects sponsored by others

IVI Specialty Vehicle Program Partnership

Structure / Participants

- **Program Management**
  - Role: Manage this IVI Specialty Vehicle Program.
- **Steering Board**
  - Role: Provide logistical, managerial, and administrative recommendations for project identification and selection.
- **Technical Advisory Committee**
  - Role: Provide technical analysis of study proposals and recommendations for technical content of studies.

IVI Specialty Vehicle Program Partnership

Project Characteristics

- **ASAP activities**
  - results affect subsequent efforts and, as such, should begin as soon as possible.
- **Near Term projects**
  - apply research and demonstrate equipment within three years.

Long Term projects

- allowed more time for technology development or strategizing and deliver results within six years.

IVI Specialty Vehicle Program Partnership Contacts for Information

FHWA Program Manager

- Gene McHale

gene.mchale@fhwa.dot.gov
(703) 285-2973

Caltrans Program Manager

- Monica Kress

monica.kress@dot.ca.gov
(916) 654-8061

Minnesota DOT Research Manager

- Marthand Nookala

marthand.nookala@dot.state.mn.us
(612) 296-8597

3. Discussion

Ken Kobetski: Contact him for information on getting on agendas for presentations to AASHTO committees. It was general consensus that this widespread contact was needed.

Vicki Neale and Mike Robinson from Virginia Tech briefly presented the schedule and status of their IVI Study on needs assessment and human factors.

Attendance:

Bill Gouse, Freightliner Corp., 4747 N. Channel Ave, Portland, OR 97218
(503) 735-7413, FAX (503) 735-6800, e-mail: Swgouse@compuserve.com

Gene McHale, FHWA, 6300 Georgetown Pike, McLean, VA 22101 (703) 285-2973, FAX (703) 285-2264, e-mail: gene.mchale@fhwa.dot.gov

John Harding, FHWA

Lee Smithson, Deputy Director Maintenance, Iowa DOT, 800 Lincoln Way, Ames, IA 50010, (515) 239-1519, e-mail: lsmiths@max.state.ia.us

John Kiljan, Colorado DOT, ITS Office, 1325 S. Colorado Blvd, Room 8770, Denver, CO, 80222, (303) 512-5858, (303) 757-1026, e-mail: jpkiljan@ix.netcom.com and/or john.p.kiljan@dot.state.co.us

Bill Bushman, Research Scientist, VA Transportation Research Council (VDOT), 530 Edgemont Rd, Charlottesville, VA 22903, (804) 293-1926, FAX (804) 293-1990, e-mail: BushmanWH@vdot.state.va.us

Wallace McKeel, Research Manager, VA Transportation Research Council (as above). Use Bill Bushman as our contact.

Ty A. Lasky, Research Engineer, AHMCT, Dept. of Mechanical Engineering, UC Davis, Davis, CA 95616, (530) 752-6366, FAX (530) 752-6714, e-mail: TALasky@ucdavis.ed

Don Duncan, ERIM International (734) 994-1200 Ext. 2623, FAX (734) 994-5338, e-mail: dduncan@erim-int.com

Charles Nelson, CNA Engineers, 2800 University Ave., S>E> Minneapolis, MN 59414, (612) 379-8805, FAX (8160), e-mail: main@cnaengineers.com

Max Donath, ITS Institute, University of Minnesota, Minneapolis, MN , (612)625-2304, FAX (612) 625-8884, donath@me.umn.edu

Heinrich Bantli, 3M, Bldg 225-4N-14, St. Paul, MN 55144, ª662) 733-0735, FAX (651) 737-1055, e-mail: hbantli@mmm.com

Dennis Foderberg, Minnesota DOT, 117 University Ave, MS32D, St. Paul, MN 55155, (651) 297-5653, (651) 215-0409, e-mail: dennis.foderberg@dot.state.mn.us

Marthand Nookala, Minnesota DOT, 395 John Iregon Blvd., St. Paul, MN 55115, (651) 296-1615, e-mail: marthand.nookala@dot.state.mn.us

Mark Robinson, SAIC/FHWA, TFHRC, 6300 Georgetown Pike, McLean, VA 22101, (703) 285-2453, e-mail: mark.robinson@fhwa.dot.gov

August Burgett, US DOT, (202) 366-5672, FAX (202) 366-7237, e-mail: august.burgett@nhta.dot.gov

Robert Ferlis, FHWA, 6300 Georgetown Pike, McLean, VA 22101, (703) 285-2680, e-mail: robert.ferlis@fhwa.dot.gov

Farid Bigdeli, Mitretek, 6300 Georgetown Pike, McLean, VA 22101, (703) 285-1049, e-mail: farid.bigdeli@ fhwa.dot.gov

John MacGowan, FHWA, 6300 Georgetown Pike, McLean, VA 22101, (703) 285-2027, e-mail: john.macgowan@fhwa.dot.gov

Ken Kobetsky, AASHTO, (202) 624-5254, e-mail: kenk@aashto.org

Steve Owen, ADOT, (602)-255-6910, FAX (602) 256-6367, e-mail: stowen@dot.state.az.us

Vicki Neale, Virginia Tech Center for Transportation Research, (540) 231-5578, e-mail: vneale@ctr.vt.edu

Catherine Carver, North Carolina State University, (919) 515-3677, FAX (919) 515-8719, e-mail: cacarver@eos.ncsu.edu

Kunwar Rajendra, Michigan DOT, (517) 335-2893 (voice, (517) 335, 1815 FAX, e0mail: rajendrak@state.mi.us

Leonhard Bernhold, North Carolina State, (919) 515-3677, e-mail: bernold@eos.ncsu.edu